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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,994	09/18/2001	Sven K. Esche	SIT-0106	2909

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EXAMINER

BURCH, MELODY M


ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

JB

 Office Action Summary	Application No. 09/954,994	Applicant(s) ESCHE ET AL.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/04 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of a passive isolator and a non-linear spring as two separate elements as recited in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. See 112 rejection below.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

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consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1 and 2 are objected to because of the following informalities: Applicant should be consistent with the way in which terms are presented. For example, in line 2 of claims 1 and 2 Applicant recites "nonlinear". Then in line 7 Applicant recites "non-linear". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 Applicant claims both a passive isolator and a non-linear spring. On pg. 10 of the remarks filed 6/23/03 Applicant admits that the passive isolator is element 14 which is described in the specification as a non-linear spring. Applicant's remarks and specification suggest that the passive isolator and the non-linear spring are

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the same element or at least that one element comprises the other (See claim 2 in which it is claimed that the passive isolator comprises a mechanical actuator which is comprised of a non-linear spring. Applicant clearly relates the non-linear spring to the passive isolator). Claim 1, however, suggests that the passive isolator and the non-linear spring are separate, distinct elements. Clarification is required. For examining purposes, Examiner will interpret the passive isolator as being element 14 or the non-linear spring based on Applicant's remarks filed 6/23/03.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by JP-2000291725 (JP'725).

Re: claim 2. JP'725 shows in figure 1 a device for adaptive vibration attenuation comprising a passive isolator 14a,18,22,28 with a nonlinear force deflection characteristic as disclosed in line 3 of the novelty section of the English abstract wherein the passive isolator comprises a mechanical actuator 14a,18,22,28 which varies an operating point along the force deflection characteristic and is comprised of a coiled spring 28, a load supporting rod 18, a non-linear spring 14a and a means 22 for externally controlling a preload to the coiled spring whereby as the coiled spring force is

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varied, the load supporting rod transfers pressure to the non-linear spring via elements 12, 16, and 28 as shown.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6361031 to Shores et al. in view of US Patent 5700000 to Wolf et al.

Re: claim 1. Shores et al. show in figure 1 a device for adaptive vibration attenuation comprising a passive isolator 22 with a force-deflection characteristic and a pneumatic actuator 44,62, and the vacuum actuated valves discussed in col. 2 lines 37-38 which varies the operating point of the isolator along the force-deflection characteristic wherein the pneumatic actuator comprises at least one upper pressure chamber 44, a spring 22 (in light of Applicant's remarks on 6/23/03 that the passive isolator is the non-linear spring), and one lower pressure chamber 32 wherein air pressure in the pressure chamber can be externally controlled as disclosed in col. 2 lines 31-39 and wherein the natural frequency of the system is regulated by applying pressure to the upper pressure chamber or the lower pressure chamber, particularly the upper pressure chamber. Examiner notes that "upper" and "lower" are relative terms and that for examining purposes the upper portions of the mount in figure 1 are shown

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in the area of element 14 and the lower portions of the mount are shown in the area of element 16.

Shores et al. do not disclose that the force-deflection characteristic of the passive isolator 5 is non-linear or that the passive isolator or spring 22 is a non-linear spring.

Wolf et al. teach in figure 6 and in col. 4 lines 30-47 the use of a vibration attenuation device comprising a passive isolator or spring 2 with a non-linear force-deflection characteristic or being characterized as a non-linear spring.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the passive isolator of Shores et al. to have been constructed such that it had a non-linear force-deflection characteristic, as taught by Wolf et al., in order to provide a means of allowing good damping and preventing shaking even at large amplitudes of perturbation as taught by Wolf et al. in col. 4 lines 43-45.

Response to Arguments

10. Applicant's arguments filed 11/30/04 have been fully considered but they are not persuasive. With regards to the JP'725 reference, Applicant argues that the cited reference does not teach a coiled spring and a load supporting rod for transferring pressure to a non-linear spring. Examiner maintains that the coiled spring 28 and the load supporting rod 18 transfer pressure to the non-linear spring 14a via element 12 and or element 16 as shown. With regards Shores in view of Wolf, Applicant argues that neither of the references teach or suggest the use of a non-linear spring wherein the natural frequency of the device can be regulated by applying pressure to an upper

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pressure chamber or lower pressure chamber. Examiner maintains that Shores et al., as modified, teach the use regulating the natural frequency of the device 10 by applying pressure to the upper pressure chamber 44 by way of elements 48 and 62 as shown.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 2, 2005

Melody M. Burch
3/2/05